



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/912,918	07/25/2001	Newton Howard	425389009	5491
23517 7590 03/25/2008 BINGHAM MCCUTCHEEN LLP 2020 K Street, N.W. Intellectual Property Department WASHINGTON, DC 20006				
EXAMINER				
OYEBISI, OJO O				
ART UNIT		PAPER NUMBER		
3696				
MAIL DATE		DELIVERY MODE		
03/25/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

09/912,918

Applicant(s)

HOWARD, NEWTON

Examiner

OJO O. OYEBISI

Art Unit

3696

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/17/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

In the amendment filed on 12/17/07, the following have occurred: claims 1 and 10 have been amended, new claims 17 and 18 have been added, and claims 1-14 and 17 and 18 are now pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-14 and 17 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed does not provide support for the invention as now claimed, i.e., "extracting content from at least one of the first natural language instruction and the second natural language instruction for execution as an instruction." The examiner searched the length and breadth of the applicant's disclosure but failed to find a single passage that provides support for the invention as now claimed.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-14 and 17 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject

matter which applicant regards as the invention. The invention as now claimed recites the limitation: "extracting content from at least one of the first natural language instruction and the second natural language instruction for execution as an instruction." The phrase "extracting content" in the present claimed limitation is not clear to the examiner. The examiner does not understand what kind of content data the applicant is extracting. The applicant, in the response dated 12/17/07, directed the examiner to pg 10, lines 18-26 of the specification to provide support for the stated limitation. The examiner consulted pg 10 lines 18-26 of the specification to further understand how the content data is extracted from the natural language instruction. However, pg 10, lines 18-26 of the specification only mentions how the OPRD Processor cycles through the OPRD pulling out fragmentary order, or FRAGO sentences, at each cycle. The examiner contends that OPRD pulling out fragmentary order, or FRAGO sentences is not the same as "extracting content from at least one of the first natural language instruction and the second natural language instruction for execution as an instruction."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over

" Varon (US PAT 6,420,993 B1).

Re Claims 1 and 17: Varon discloses an automated system for notifying a first user who issued a first natural instruction pertaining to a future event of a potential conflict with a second natural language instruction pertaining to a current event comprising:

- An input device for receiving the first natural instructions entered by the first user (Column 4, lines 24-26; "flight data plans," flight data processor (24a) receives plans submitted by aircraft personnel to designate routes.")
- A passive (radar, transponders) input device for receiving the second natural language instruction entered by the second user (Column 4, lines 8-21; flight data and plans for second plane),
- An intention determination system for, extracting content from the first natural language instruction and the second natural language instruction, and determining if execution of the instructions complies with the intent of a user issuing the first natural language instruction prior to the execution of the first natural language instruction based in part, on a comparison of the content extracted from each of the

first natural language instruction and the second natural language instruction, and issuing a potential conflict alert if the execution of the first natural language instruction fails to comply with the intent of the user issuing the first natural language instruction (Column 4 lines 26-38; Column 4 line 66-Column 5 line 18). Varon does not explicitly disclose first and second user interfaces for respectively notifying the first and second user by displaying the alert. However user interface was well known in the art and therefore would have been obvious to anyone of ordinary skill at the time of invention for airplanes to have user interfaces such as a radar system in the cockpit in order to notify and display the pilots if there is a potential conflict with regards to other aircraft. If there were no means to relay this information from the air traffic controller to the pilots, the pilots might not know of the potential conflict and may not be able alter their routes to avoid the issue.

Re Claim 2: Varon discloses the claimed system supra but does not explicitly disclose wherein the instructions include text messages. However the submission of text messages is a notoriously old and well-known form of electronic communication and would have been obvious to one of ordinary skill at the time of invention to include to the system of Varon. One would be motivated to do this in order to provide short and succinct instructions in a language that is easily viewed and interpreted by an input device.

Re Claim 3: Varon discloses the claimed system wherein the instructions are converted to executable instructions for machine processing (this is an inherent

feature in that in a digital world instructions are usually converted to executable instructions for machine processing).

Re Claim 4: Varon discloses the claimed system and further discloses wherein the input device includes a device selected from the group consisting of a PDA, cellular phone and a radio transmitter (Column 3, lines 65 - Column.4 line 7).

Re Claim 5: Varon discloses the claimed system supra and further discloses wherein the passive input device includes a device selected from the group consisting of a cellular phone and an electronic pad, a sensor ("transponder" Column 4, lines 17- 19; "second portions of the target signal."), and a satellite.

Re Claim 6: Varon discloses the claimed system supra but does not explicitly disclose an output device for generating a record of the alert. However it was well known in the art at the time of invention to use a printer for such applications and therefore it would have been obvious to anyone of ordinary skill to include this feature to the system of Varon. One would be motivated to do this in order to have a record of past alerts to review the past conflicts in order to adjust future flight plans and timing patterns to avoid similar problems in the future.

Re Claim 7: Varon discloses the claimed system supra but does not explicitly disclose wherein each of the user interfaces includes a node-based navigation system that allows user customization of how the alert is displayed. However it was well known for node-based navigation systems to be used by pilots in order to display an aircrafts position relative to other aircraft. Furthermore it was well known for a user to customize a display interface so that each individual can quickly and easily interpret the data on

the display in a manner that is most comfortable to them. Therefore it would have been obvious to include these features to the system of Varon so that each pilot can be notified of a potential conflict and furthermore can view the upcoming hazard so that evasive action can be taken.

Re Claim 8: Varon discloses the claimed system supra and discloses wherein at least one of the first users issues at least one of the instructions from a remote location (planes are inherently in remote locations).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Varon as applied to claim 1 above, and further in view of Ludwig (US 6,408,404 B1).

Re Claim 9: Varon discloses the claimed method supra and further discloses

- An input module for receiving and processing the first natural language instruction and the second natural language instructions (Column 4, lines 24-26; Ref 24a)
- A rule base analyzer for periodically retrieving and processing content extracted from the first natural language instruction and the second natural language instructions and reference information to determine if execution of the instructions creates the potential conflict (Column 4, lines 30-37, lines 60-65)

Varon does not explicitly disclose:

- A language converter for converting the first natural language instruction and second natural language instruction from a natural language format to a position-based symbolic format wherein the conversion generates restructured instructions
- A database for storing both the instructions, the restructured instructions and reference information. Ludwig discloses a system and method for ensuring and managing

situation awareness including a language converter for translating data streams (Column 5, lines 19-27 and Column 6, lines 20-21). It would have been obvious to anyone of ordinary skill at the time of invention to include this feature to the system of Varon so that there is not a substantial delay if the instructions are received in a language that is not the standard. Any delay in the instruction processing is potentially dangerous as the planes in the Varon system may be on a path for conflict. The sooner this is recognized, the sooner evasive action can be taken. By providing a language translator between the user and the system and delays can be minimized.

Furthermore, Ludwig discloses a database for storing information related to the instructions and reference information (Column 5, lines 48-58; Ref 190). It would have been obvious to anyone of ordinary skill at the time of invention to include this feature to the system of Varon so that there is a way to recall the instructions in the instance that there is a problem in the language translation. If the language transformation was improper and the original instructions were not stored, the original information would be lost and there would not be any means to determine the original intent of the instructions. This would be hazardous as potential conflicts with aircrafts are very time dependent and any delay in issuing an alert would be dangerous.

The references also do not disclose wherein the language converter converts the instructions into a positions based format. However this step is old and well known in the air traffic control, and would have been obvious to anyone of ordinary skill to allow tactical planners to assess the geographical position of the parties involved in order to assess the risk involved. Utilizing a position-based format allows each party to be

marked respective to one another, which allows for more efficient planning.

Claims 10-14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ludwig (6,408,404 B1) in view of Varon.

Re Claim 10: Ludwig discloses a system and method for ensuring and managing situation awareness for checking of potentially conflicting natural language instruction issued by a plurality of users comprising:

- An input module for, extracting content from the instructions where the instructions include a first natural language instruction and a second natural language instruction each of the first natural language instruction and the second natural language instruction related to a future event (Column 7, lines 51-57)
- A language converter for converting the first natural language instruction and the second language instruction from a natural language to a format, wherein the conversion generates restructured messages (Column 5, lines 24-26; Column 6, lines 20-21)
- A database for storing both the first natural language instruction and the second language instruction, the restructured messages and reference information (Ref 195; Column 5, lines 48-58)
- A rule-based analyzer for periodically retrieving and processing, content extracted from the first natural language instruction and second natural language instruction, restructured messages, and reference information wherein, processing includes determining if execution of the instructions complies. with the intent of a user issuing the instructions based, in part, on a comparison of the restructured messages with stored

reference information (Column 4, lines 25-38) and wherein the analyzer generates an alert if execution of content extracted from the first natural language and second natural language instruction fails to comply with the intent of the user (Column 7, line 65-Column 8 line 14).

Ludwig does not disclose wherein the system is an intention determination system for predictive checking of potentially conflicting messages. Varon discloses an air traffic control system that periodically monitors air traffic based on current situational awareness as well as intention-based information (i.e. flight path; Column 4, lines 24-26) and issues alerts about potential conflicts. It would have been obvious to anyone of ordinary skill in the ordinary art at the time of invention to include the intention determination aspect of Varon to the disclosure of Ludwig in order to provide the system with a more forward looking timeline of potential events and military conflicts. Ludwig discloses that his invention is intended to have a dynamic temporal flow and present information is events spread over a timeline with a past present and a future (Column 6, lines 48-54). By providing high probability future events (such as flight plans for military operations), the system can extend even further and provide the user with even more information from which to make decisions. This would further assist in assessing events and issuing rule-based actions. The references also do not disclose wherein the language converter converts the instructions into a positions based format. However this step is old and well known in military conflicts, and would have been obvious to anyone of ordinary skill to allow tactical planners to assess the geographical position of the parties involved in order to make a coordinated plan. Utilizing a position-based

format allows each party to be marked respective to one another, which allows for more efficient planning.

Re Claim 11: Ludwig in view of Varon discloses the claimed system supra and while not explicitly disclosing wherein the instructions include orders issued by military personnel, Ludwig discloses the advantages of his system for low intensity conflict monitoring, military intelligence and strategic threat assessment (Column 1, lines 44-48). It was old and well known in the art for military personnel to handle issues of military intelligence and strategic threat assessment and therefore would have been obvious to anyone of ordinary skill at the time of invention that instructions relating to such matter are issued by military personnel.

Re Claim 12: Ludwig in view of Varon discloses the claimed system supra and Ludwig further discloses wherein the input device includes a device selected from the group consisting of a cellular phone, a radio transmitter, an electronic pad, a sensor and a satellite (Column 5, lines 29-31).

Re Claim 13: Ludwig in view of Varon discloses the claimed system supra and Ludwig further discloses wherein the user allows user customization of how the alert is displayed (Column 8, line 14-17 and 29-31). While not explicitly disclosing a node based navigation system, these types of systems are old and well known in the art (such as a grid based satellite tracking system) and would have been obvious to anyone of ordinary skill at the time of invention. One would be motivated to include this feature in order to coordinate disjointed parties and locate their positions relative to one another.

Re Claim 14: Ludwig in view of Varon discloses the claimed method supra wherein at least one of the instructions is issued from a remote location (Column 2, lines 10-14 "disjointed sources").

Re claim 18. Ludwig discloses the system according to claim 1, further comprising at least one user interface for respectively notifying the first user by displaying the alert (Column 8, lines 15- 18).

Response to Arguments

Applicant's arguments filed 12/17/07 have been fully considered but they are not persuasive. The applicant argues in substance that the specification provides support for the limitation "extracting content from at least one of the first natural language instruction and the second natural language instruction for execution as an instruction," and directed the examiner to pg 10, lines 18-26 and pg 11, lines 17-27 of the specification to provide support for the stated limitation. The applicant further argues that since the specification provides support for the stated limitation, the 112th, first paragraph rejection should be withdrawn, and since one of ordinary skill in the art would know what is meant by the phrase "extracting content," the 112th, second paragraph rejection should also be withdrawn. The examiner consulted pg 10 lines 18-26 of the specification to further understand how the content data is extracted from the natural language instruction. However, pg 10, lines 18-26 of the specification only mentions how the OPRD Processor cycles through the OPORD pulling out fragmentary order, or FRAGO sentences, at each cycle. The examiner contends that OPORD pulling out

fragmentary order or FRAGO sentences is not the same as "extracting content from at least one of the first natural language instruction and the second natural language instruction for execution as an instruction." The examiner further contends that the specification as originally filed does not provide support for the invention as now claimed, i.e., "extracting content from at least one of the first natural language instruction and the second natural language instruction for execution as an instruction." And it is not clear what kind of content data the applicant is extracting. The examiner thus maintains the 112th first and second, paragraph rejections.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OJO O. OYEBISI whose telephone number is (571)272-8298. The examiner can normally be reached on 8:30A.M-5:30P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Dixon can be reached on (571)272-6803. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ella Colbert/
Primary Examiner, Art Unit 3696

o.o

Application Number**Application/Control No.**

09/912,918

**Applicant(s)/Patent under
Reexamination**

HOWARD, NEWTON

Examiner

OJO O. OYEBISI

Art Unit

3696